

Amendment to the Claims:

1. (Currently Amended) A high-frequency system for an MR apparatus with a high-frequency coil arrangement comprising a plurality of resonator elements, which coil arrangement is coupled to a transmit unit where a respective transmit channel of the transmit unit is assigned to the resonator elements,

5 wherein the transmit unit comprises with a plurality of high-frequency amplifiers, the inputs of which ~~can~~ receive low-power transmit signals via a first controllable multiplexer/distributor network, in which the output signals of the high-frequency amplifiers ~~can be~~ are distributed over the transmit channels via a second controllable multiplexer/distributor network.

2. (Previously Presented) A high-frequency system as claimed in claim 1, wherein a control unit is assigned to the transmit unit for activating the multiplexer/distributor networks.

3. (Currently Amended) A high-frequency system as claimed in claim 2, wherein the gain factor of each high-frequency amplifier of the transmit unit ~~can be~~ is controlled via the control unit.

4. (Previously Presented) A high-frequency system as claimed in claim 3, wherein measurement sensors, coupled to the control unit, serve for determining the high-frequency field strength generated by means of the individual resonator elements.

5. (Previously Presented) A high-frequency system as claimed in claim 1, having a plurality of controllable high-frequency signal generators for generating the low-power transmit signals.

6. (Previously Presented) A high-frequency system as claimed in claim 1, wherein the amplitudes and phases of the high-frequency signals supplied to the resonator elements via the transmit channels are individually preselectable.

7. (Previously Presented) A high-frequency system as claimed in claim 1, having a receive unit with a plurality of receive channels assigned to the respective resonator elements.

8. (Previously Presented) A high-frequency system as claimed in claim 1, having isolators, these being connected between the outputs of the high-frequency amplifiers and the corresponding inputs of the second controllable multiplexer/distributor network and/or between the outputs of the second controllable
5 multiplexer/distributor network and the corresponding resonator elements of the high-frequency coil arrangement.

9. (Previously Presented) An MR apparatus with a main field coil for generating a homogeneous, static magnetic field in an examination volume, a number of gradient coils for generating magnetic field gradients in the examination volume, a high-frequency system for generating high-frequency fields in the examination
5 volume and for acquiring MR signals from the examination volume, and with a central control unit for activating the gradient coils and the high-frequency system, and a reconstruction and display unit for processing and displaying the MR signals, wherein the design of the high-frequency system is as claimed in claim 1.

10. (Previously Presented) The high frequency system as set forth in claim 7 further including an array of transmit/receive switches which, in a transmit mode, connect the channels of the transmit unit with the resonator elements and, in a receive mode, connect the channels of the receive unit with the resonator elements.

11. (Currently Amended) A magnetic resonance system comprising:
a plurality of resonator elements disposed adjacent an examination volume;
a transmit unit for applying a plurality of RF signals of individually
5 adjustable amplitude to each of the resonator elements, the transmit unit including:
a plurality of power amplifiers,

10 a first, controllable distribution network connected with
inputs of the power amplifiers which controllably distributes
simultaneously one or more lower power RF input signals among the
plurality of power amplifiers, and

15 a second, controllable distribution network connected with
outputs of the plurality of power amplifiers and with the plurality of
resonator elements which controllably distributes output signals from
the plurality of amplifiers over a plurality of transmit unit outputs to
generate the plurality of individually amplitude adjusted RF signals
that are applied to the resonator elements, the relative amplitude of
each of the individually amplitude adjusted RF signals being adjusted
by ~~distribution patterns~~ of the first and second distribution networks.

12. (Previously Presented) The magnetic resonance system as claimed
in claim 11, further including:

a plurality of receive channels;
a plurality of transmit/receive switches for selectively interconnecting the
5 resonator elements with the transmit unit and the receive channels.

13. (Currently Amended) ~~The~~ A magnetic resonance system as
~~claimed in claim 11, further including:~~

a plurality of resonator elements disposed adjacent an examination
volume;

5 a transmit unit for applying a plurality of RF signals of individually
adjustable amplitude to each of the resonator elements, the transmit unit including:

a plurality of power amplifiers,
a first, controllable distribution network which controllably
distributes simultaneously one or more lower power RF input signals
10 among the plurality of power amplifiers, and

a second, controllable distribution network which
controllably distributes output signals from the plurality of amplifiers
over a plurality of transmit unit outputs to generate the plurality of

15 individually amplitude adjusted RF signals that are applied to the
resonator elements;

a control unit for controlling the first and second
controllable distribution networks; and,

a plurality of sensors disposed adjacent the examination region to sense
RF signals in the examination region and provide feedback information to the control
20 unit for adjusting the first and second distribution networks.

14. (Previously Presented) The magnetic resonance system as claimed
in claim 11, further including:

a control network for controlling the first and second controllable
distribution networks to control relative amplitudes of RF signals supplied to each of
5 the resonator elements.

15. (Previously Presented) The magnetic resonance system as claimed
in claim 14, wherein the control unit further controls a gain of each of the power
amplifiers.

16. (Currently Amended) The magnetic resonance system as claimed
in claim [[11]] 13, further including:

a plurality of high frequency signal generators for supplying high
frequency signals to the first distribution network to be distributed among the plurality
5 of power amplifiers.

17. (Previously Presented) The magnetic resonance system as claimed
in claim 16 wherein the high frequency generators control at least phases of the
signals supplied to each resonator element.

18. (Currently Amended) A magnetic resonance method comprising:
distributing a plurality of low power RF signals among inputs to a
plurality of power amplifiers;

- ~~distributing~~ combining outputs of ~~from~~ the plurality of power amplifiers
5 and distributing the combined outputs among a plurality of RF channels;

during a transmit mode, connecting the RF signals from the plurality of RF channels to a plurality of resonator elements to excite resonance in a subject adjacent the resonator elements.

19. (Currently Amended) The method as claimed in claim 16 further including:

during a receive mode, connecting the plurality of resonator elements with a plurality of receiver channels;

reconstructing signals from the receive channels into a diagnostic image.